

Application No. 09/990,754

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method comprising:
 - identifying a processing capability of a remote device; and
 - slowing an effective data rate within a communication channel with the remote device based at least in part on the processing capability of the remote device, ~~wherein slowing comprises injecting control elements, wherein slowing the effective data rate comprises:~~
 - computing a ratio of processing capability of the remote device to a data rate of the communication channel; and
 - selectively inserting a number of frames of idle control elements between at least one frame of substantive content based, at least in part, based on the computed ratio.
2. (Previously Presented) A method according to claim 1, wherein identifying the processing capability of the remote device comprises:
 - sending a capability request; and
 - receiving a response to the request denoting at least the processing capability of the remote device.
3. (Previously Presented) A method according to claim 1, wherein identifying the processing capability of the remote device comprises:
 - receiving an indication from the remote device denoting at least the processing capability of the remote device.

Application No. 09/990,754

4. (Previously Presented) A method according to claim 3, wherein the indication also denotes a communication capability of the remote device.
5. (Previously Presented) A method according to claim 1, further comprising:
establishing at least one virtual channel within the communication channel, each virtual channel having a data rate less than that of a maximum transmission rate of the communication channel and wherein the data rate of each virtual channel is based, at least in part, on the identified processing capability of the remote device.
6. (Cancelled)
7. (Previously Presented) A method according to claim 1, wherein at least the processing capability of the remote device is obtained through auto-negotiation.
8. (Cancelled)
9. (Currently Amended) A method according to claim ~~[[8]]~~ 1, wherein the number of frames inserted reduces a rate at which substantive frames are received by the remote device to a level commensurate with the processing capability of the remote device.
10. (Currently Amended) An apparatus comprising:
control logic to identify a processing capability of a remote network device; and

Application No. 09/990,754

a media access controller (MAC), responsive to the control logic, to selectively reduce an effective data rate of a communication channel with the remote network device based, at least in part, on the identified processing capability of the remote network device, ~~wherein the MAC is to selectively reduce the effective data rate by selectively injecting control elements,~~
wherein to reduce the effective data rate, the MAC is to:

compute a ratio of processing capability of the remote device to a data rate of the communication channel; and

selectively insert a number of frames of idle control elements between at least one frame of substantive content based, at least in part, based on the computed ratio.

11. (Previously Presented) An apparatus according to claim 10, wherein the control logic sends a capability request to the remote device and receives a response to the request denoting at least the processing capability of the remote device.

12. (Previously Presented) An apparatus according to claim 10, wherein the control logic receives a broadcast indication from the remote device denoting at least the processing capability of the remote device.

Claims 13-15. (Cancelled)

16. (Currently Amended) A computer-readable storage medium comprising content which, when executed by an accessing computing

Application No. 09/990,754

device, causes the device to implement a scalable network interface to identify a processing capability of a remote network device, and to selectively reduce an effective data rate of a communication channel between the accessing computing device and the remote network device based, at least in part, on the processing capability of the remote network device, wherein ~~the device is to selectively reduce the data rate by injecting control elements to reduce the effective data rate, the scalable network interface is to: compute a ratio of processing capability of the remote device to a data rate of the communication channel and selectively insert a number of frames of idle control elements between at least one frame of substantive content based, at least in part, based on the computed ratio.~~

17. (Cancelled)

18. (Cancelled)

19. (Original) The method of Claim 1, wherein the communication channel comprises an Ethernet compatible communications channel.

20. (Cancelled)

21. (Original) An apparatus of Claim 10, wherein the communication channel comprises an Ethernet compatible communications channel.

22. (Cancelled)

23. (Previously Presented) An apparatus comprising:

Application No. 09/990,754

control logic to identify a processing capability of a remote network device;

a media access controller (MAC), responsive to the control logic, to selectively reduce an effective data rate of a communication channel with the remote network device based, at least in part, on the identified processing capability of the remote network device; and

a plurality of MACs, wherein the plurality of MACs includes the MAC and a second MAC, wherein the MAC and the second MAC are capable of transmission to the remote network device at different rates, wherein the control logic is to:

select a MAC for use in a communication channel with the remote network device based in part on the processing capability of the remote network device being approximately equal to the transmission rate of the selected MAC; and

if the selected MAC having a transmission rate approximately equal to the processing capability of the remote network device is not available, selecting a MAC having a transmission rate higher than the processing capability of the remote network device and providing a virtual channel within the transmission capabilities of the higher transmission rate MAC to provide the communication channel with the remote network device based at least in part on the processing capability.

24. (Currently Amended) A system comprising:

Application No. 09/990,754

first and second network elements capable of intercommunicating, wherein the second network element comprises:

logic to identify receiving rate capability of the first network element; and

logic to selectively reduce a data rate within a communication channel with the first network element based, at least in part, on the identified processing capability of the first network element, wherein the logic to selectively reduce a data rate is to reduce the data rate by injecting control elements compute a ratio of processing capability of the first network element to a data rate of the communication channel and selectively insert a number of frames of idle control elements between at least one frame of substantive content based, at least in part, based on the computed ratio.

25. (Original) The system of Claim 24, wherein the first network element includes a media access controller.

26. (Original) The system of Claim 24, wherein the first network element includes a media access controller capable of processing transmissions at a speed less than that which the second network element is capable of transmitting.

27. (Cancelled)

28. (Previously Presented) The system of Claim 24, wherein

Application No. 09/990,754

the first and second network elements apply auto-negotiation to determine an acceptable transmission rate for the communication session.

29. (Currently Amended) ~~The apparatus of Claim 10, further comprising:~~ An apparatus comprising:

control logic to identify a processing capability of a remote network device; and

a media access controller (MAC), responsive to the control logic, to selectively reduce an effective data rate of a communication channel with the remote network device based, at least in part, on the identified processing capability of the remote network device;

a plurality of MACs, wherein the plurality of MACs includes the MAC and at least one other MAC, wherein the MAC and the at least one other MAC are each capable of transmitting to the remote network device, wherein the control logic is to:

select at least one of the plurality of MACs for use in a communication channel with the remote network device, wherein a combined transmission rate of the selected at least one of the plurality of MACs is approximately equal to a receiving capability of the remote network device; and

select one of the plurality of MACs for use in a communication channel with the remote network device, wherein the selected one of the plurality of MACs is capable of a transmission rate higher than the receiving capability of the remote network device and wherein the selected one of the plurality of MACs

Application No. 09/990,754

provides a virtual channel to provide the communication channel with the remote network device.

30. (New) The apparatus of Claim 29, further comprising a 10Gb/s attachment unit interface (XAUI) communicatively coupled to at least one of the plurality of MACs.

31. (New) The apparatus of Claim 30, wherein the XAUI comprises multiple channels and wherein each of the plurality of MACs is capable to transmit over at least one of the multiple channels.

32. (New) The apparatus of Claim 31, further comprising logic to selectively inject alignment elements in response to more than one of the multiple channels being used to receive frames from at least one of the plurality of MACs.

33. (New) The apparatus of Claim 29, wherein the control logic sends a capability request to the remote device and receives a response to the request denoting at least the processing capability of the remote device.

34. (New) The apparatus of Claim 29, wherein the control logic receives a broadcast indication from the remote device denoting at least the processing capability of the remote device.

35. (New) The apparatus of Claim 29, wherein the communication channel comprises an Ethernet compatible communications channel.

Application No. 09/990,754

36. (New) The apparatus of Claim 29, wherein at least one MAC that is to transmit is to selectively insert at least one idle control element between at least one frame of substantive content associated with a communication with the remote device to reduce the effective data rate of the communication channel.

37. (New) The apparatus of Claim 29, wherein to reduce the effective data rate, at least one MAC is to:

compute a ratio of processing capability of the remote device to a data rate of the communication channel; and

selectively insert a number of frames of idle control elements between at least one frame of substantive content based, at least in part, based on the computed ratio.